

# Notice of Allowability

Application No.

10/669,688

Examiner

John B. Vigushin

Applicant(s)

SAKAKI, YOICHIRO

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed 25 Sep 2003; Election 22 Sep 2005.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 0104//12 Jan 2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 0905.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other See Continuation Sheet.

Continuation of Attachment(s) 9. Other: JP01-235922 A and JP04-218933 A (full Japanese documents with English language Abstracts).

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-18, drawn to an electronic module, classified in class 361, subclass 803.
  - II. Claim 19, drawn to method of making an electronic module, classified in class 29, subclass 830.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process such as a process not requiring the step of forming an anisotropic conductive film; instead, a conductive elastomer film in conjunction with a separate adhesive may be formed on a predetermined region of a terminal region of the electronic circuit board.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Art Unit: 2841

4. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Peter Medley on September 22, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-18. Affirmation of this election need not be made by Applicant (see Part III of the Interview Summary Form 413B attached to the present Office Action). Claim 19 is withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Examiner's Amendment***

6. This application is in condition for allowance except for the presence of Claim 19 non-elected without traverse. Accordingly, **Claim 19 has been cancelled.**

***Allowable Subject Matter***

7. Claims 1-18 have been allowed.

8. The following is an examiner's statement of reasons for allowance:

As to Claims 1-18, patentability resides in *a first driver circuit board, a second driver circuit board and an input board, all mounted on the terminal region of the electronic circuit board such that the first and second branch wiring lines of the input board are electrically connected to the plurality of input terminals of the first and second*

**driver circuit boards**, respectively, **via the plurality of board terminals of the electronic circuit board**, in combination with the other limitations of base Claim 1.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Yano (US 6,864,941 B2) discloses, in Fig. 1, an input board 131 with branch wiring lines 101-105 is connected to the inputs of first and second driver IC chips 409 and 410 (col.8: 14-22). The first and second driver chips 409, 410 are COG mounted directly onto display panel circuit board 108 (col.8: 22-27). Yano does not teach first and second driver circuit boards (each carrying an IC driver chip) with input terminals, wherein the first and second driver boards and the branch wiring lines of the input board are interconnected by way of the display panel circuit board terminals.

b) Kawasaki (US 6,424,400 B1) discloses, in Fig. 8, an input board 11 with branch wiring lines 12 connected to the inputs of driver chips 3. The driver chips 3 are directly mounted to the display panel circuit board by COG technology; driver chips 3 are not mounted to respective driver chip circuit boards (col.2: 34-col.3: 5).

c) Cha et al. (US 6,519,020 B1) discloses an input board 130 with an integral link portions 126, 128 that carry the driver IC chips 42, 52 and thereby replace a separate tape carrier package (TCP) for each driver IC chip 42, 52. The input board would appear to inherently have signal lines that include branch wiring that is connected to the link portions 126, 128 and driver chips 42, 52.

d) Suzuki et al. (US 6,437,764 B1) discloses a gate input board 15 and drain input boards 16A,B. The gate and drain driver IC chips 5, 6 are directly mounted to the panel display circuit board, and not to respective driver carrier boards (Fig. 2). The shape and structure of the input boards 15, 16A,B suggest they have branch wiring leading to electrodes 70B on the display panel circuit board (Figs. 2 and 4; col.7: 40-41).

e) Yomogihara et al. (US 5,737,053) discloses, in the embodiments of Figs. 12 and 13, an input board 30 with branch wiring wherein first branch wiring lines are connected to inputs of a first driver IC chip 22 on the left-hand side, and second branch wiring lines are connected to the inputs of a second driver IC chip 22 on the right-hand side by way of display panel wiring 26 (col.8: 21-col.9: 14). Yomogihara et al. discloses that the IC chips 22 are directly mounted on the display panel circuit board but does not teach that driver IC chips 22 are mounted to respective driver carrier boards with inputs thereon, wherein the driver carrier boards would be directly mounted to the display panel circuit board.

f) Yamagami et al. (JP01-235922 A) discloses an input board 12 with branch wiring lines directly connected to the inputs of driver IC chips 13 that are mounted on the display panel circuit board 11 (Fig. 1).

Art Unit: 2841

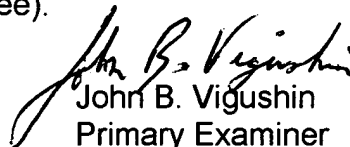
g) Furuichi et al. (US JP04-218933 A) discloses an input board 8 with branch wiring lines connected to the inputs of first and second IC chip driver boards 4, and the outputs of the first and second IC chip driver boards 4 are mounted to the display panel circuit board 7 (Figs. 4 and 5). In Furuichi et al., the input board 8, first and second chip driver boards 4 are not all directly connected to the display panel circuit board 7 and interconnected with one another by way of the terminals on display panel circuit board 7.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Vigushin whose telephone number is 571-272-1936. The examiner can normally be reached on 8:30AM-5:00PM Mo-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John B. Vigushin  
Primary Examiner  
Art Unit 2841

jbv

September 25, 2005